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# THE TECHNIC OF COMMUNICABLE DISEASE NURSING

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AS a part of her equipment, especially for Public Health work, every nurse needs experience in the care of communicable diseases, especially those usually spoken of as children's diseases, the most outstanding of which are Scarlet Fever, Diphtheria, Measles, Chicken-pox and Whooping Cough. The contagion index of these is high, ranging from 50-75 per cent in Diphtheria, and 60 per cent in Scarlet Fever, to 90-100 per cent in Measles and Chicken-pox, so that every family in the community at some time or other has one or more of these diseases among its younger members. To most of them the child between one and six seems to have the least immunity, this period showing also the greatest mortality rate.

This group of diseases is largely cared for in the home. No hospital except the one especially designed for communicable diseases will admit them and the number of such hospitals is out of all proportion to the prevalence of the diseases. Even in large cities where a hospital for communicable diseases is available, the number admitted is low. During 1920, in one of our larger cities, the communicable disease hospital cared for only about 11 per cent of the reported cases of Scarlet Fever, less than 8 per cent of the reported diphtheria and between 3 and 4 per cent of each of the remainder. Needless to say, a large per cent of these were of the worst type, which it was impossible to care for properly at home, and many of which helped to raise the hospital mortality rate because they came in too late to receive any benefit from such care.

The incubation and febrile period of these diseases is the period of greatest infectiousness. At this time the child often shows symptoms similar to a beginning cold. No particular attention is paid to it until a rash appears or the disease becomes so definite that it cannot be mistaken. In the meantime, all the children in the neighborhood have been exposed. To be able to observe the suspicious cases and to teach the proper care, would go a very long way toward prevention of epidemics. There still exists the popular feeling (among both professional and lay people) that children will have all of these diseases and that it is better to have them while young. In good faith children are needlessly exposed. Again there is the selfish individual who is willing to have her children expose whom they will, rather than make the effort to keep them at home. Too often cases

are not reported to the proper authorities and then these cases continue to contribute the infectious material for new cases.

The complications and after effects of these diseases are many times worse than the disease. To many people, the nephritis of today has no relation to the Scarlet Fever some time past, or the weak heart to the sore throat which they "doctored themselves."

Bacteriologists have contributed much to our knowledge of these diseases, but as yet we have only just begun. We no longer conjure up all of the dreadful things that might have caused this calamity to the individual, for we know that some wee organism which needs for its growth and development just the substances the human body can furnish, has taken up its abode and is carrying on its own life processes at the expense of the individual. We have been able to isolate but a few of these disease-producing organisms, but the similarity of the reactions leads us to believe that the others exist, though they have thus far eluded us.

We know too that there are specific types for specific diseases—that the diphtheria bacillus always produces diphtheria, and the Bordet bacillus always produces Whooping Cough; that they must obtain entrance in large enough numbers and be of great enough virulence to overcome the normal defenses of the body, before they can develop; that the individual's ability to ward off the invasion of these organisms is influenced by his general physical condition. Any technic which would lessen the transmission of these diseases and aid in their control must be built upon the preceding facts. This aseptic technic seeks to do and has proven most successful where strict attention to detail has been followed out. It requires intelligent habit formation and the coöperation of all individuals concerned.

The methods of isolation carried out in different institutions are variously designated as the unit system, the box system, cubicle system, etc. The difference in designation is due to the construction of this physical unit. The room or box system consists of separate rooms, with complete partition, while the cubicle system has a low wall or glass partition between each two units. Another type of unit is that of the bed isolation or bed barrier system. Here the physical unit is established by means of cards, isolation, barrier, etc.; screening the bed, or roping in an area around the bed. The purpose of each is to call the attention of those coming and going, to the fact that here is a contaminated area in which certain special precautions must be carried out.

In the hospital, these contaminated units are usually limited to the rooms or wards in which the patients are, and to the lavatories and bath rooms used by patients. The remainder of the floor, corridors,

drug rooms, kitchens, etc., are clean areas. Within these clean areas one can come and go without fear of contamination. Anything brought from a contaminated area must be thoroughly sterilized or disinfected before placing it in the clean area. All dishes and utensils are put directly into the sterilizer and thoroughly boiled; refuse and garbage is burned; soiled linen is put into bags without contaminating the outside and sent to the laundry where one individual puts it into the washer and then scrubs up, or it is put into a disinfectant solution for a time, or put into the autoclave.

As little useless contamination of apparatus and material as is possible and still do efficient work is the key note of the technic. When entering the unit to care for a patient the nurse puts on a gown so that she may do her work with greater comfort for both patient and herself and as a protection against possible contamination of her uniform. When ready to leave the room, she unties her gown and scrubs her hands with soap and water. She then removes her gown, which, if it is to remain in the room, she carefully folds with the clean side in, or if to be hung outside the contaminated area, with the contaminated side in and again scrubs her hands.

Individual equipment will lessen the amount of time required and facilitate the work when there are units of different types. On the wards with like cases the ward supply will suffice.

The technic is the same for one unit or many. In caring for patients within any unit the nurse may go from one to another without scrubbing her hands, but she must scrub thoroughly before entering a unit of another type. With the greatest care and conscientiousness on the part of all who in any way come in contact with an individual having a communicable disease, a cross infection may occur; but the percentage of cross infection with good technic is almost negligible.

The infectiousness of the patient decreases rapidly, though he is held in quarantine for a certain period after all symptoms have disappeared. Preparation for dismissal consists of a cleansing bath and shampoo.

At the close of a communicable disease the bed and other furniture which may have been contaminated are scrubbed, the mattress put in the sunshine or autoclaved, and the room allowed to air for several hours. Soap and water together with sun and fresh air are more valuable disinfectants than any amount of fumigation.

The application of medical asepsis to the case of communicable diseases in any situation may readily be accomplished by limiting the infectious patient and his discharges to a definite area and by applying the principles of asepsis within this area.